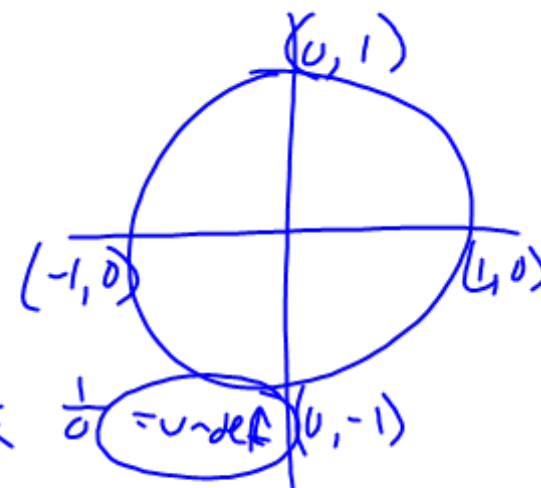


All angle measures are in degrees



$$1. \tan 90 = \frac{y}{x} = \frac{1}{0} = \text{undef}$$

$$6. \sec 270 = \frac{1}{x} = \frac{1}{0} = \text{undef}$$

$$2. \sin 45 = \frac{1}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}} = \frac{\sqrt{2}}{2}$$

$$7. \tan 180 = \frac{y}{x} = \frac{0}{-1} = 0$$

$$3. \cos 270 = 0$$

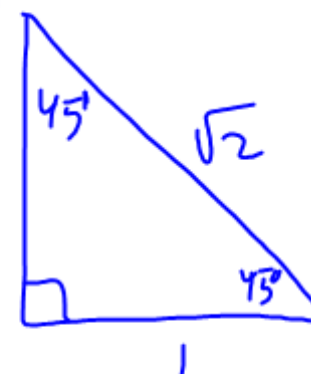
$$8. \csc 90 = \frac{1}{y} = 1$$

$$4. \sec 360 = \frac{1}{\cos 0} = \frac{1}{x} = 1$$

$$9. \cos 45 = \frac{1}{\sqrt{2}} = \frac{\sqrt{2}}{2}$$

$$5. \csc 180 = \frac{1}{y} = \frac{1}{0} = \text{undef}$$

$$10. \cot 45 = \frac{x}{y} = 1$$



All angles are in degrees. Give exact answers.

$$\cos(60) = \frac{1}{2}$$

$$\cos(180) = -1$$

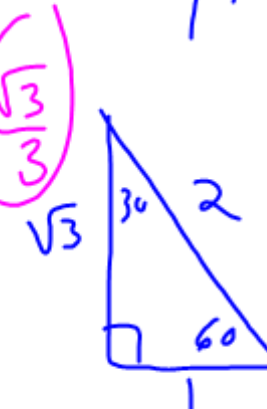
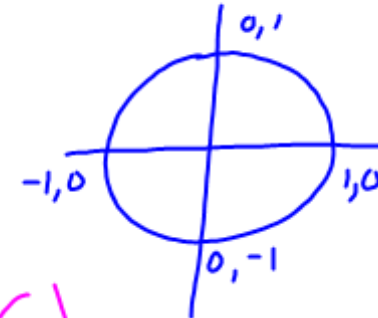
$$\sin(30) = \frac{1}{2}$$

$$\sin(270) = -1$$

$$\tan(90) = \frac{y}{x} = \frac{1}{0} = \text{undef.} \quad \cot(60) = \frac{\text{adj}}{\text{opp}} = \frac{1}{\sqrt{3}} = \frac{\sqrt{3}}{3}$$

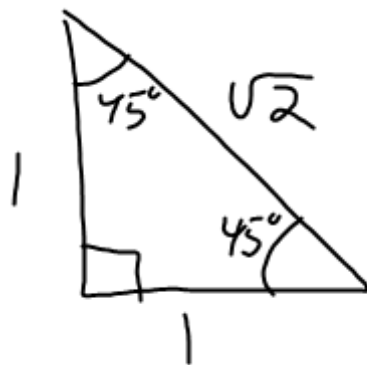
$$\sec(270) = \frac{1}{x} = \text{undef.} \quad \csc(45) = \frac{\text{hyp}}{\text{opp}} = \sqrt{2}$$

$$\cos(30) = \frac{\sqrt{3}}{2} \quad \tan(45) = 1$$



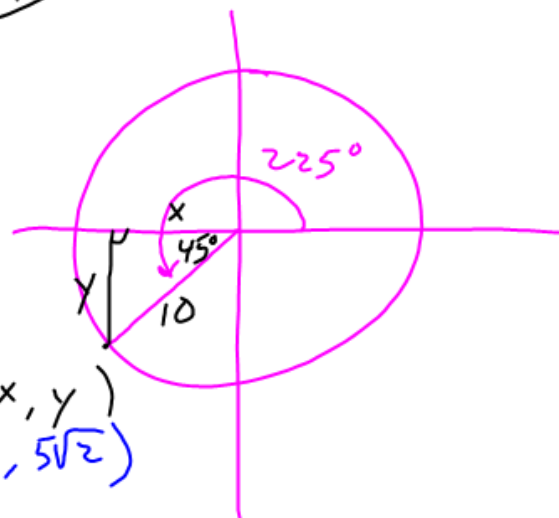
2.1 #52

$$\sin 45^\circ = 0.7071067812 \dots \text{ approximate}$$



$$\sin 45 = \frac{1}{\sqrt{2}} = \frac{\sqrt{2}}{\sqrt{2}} = \left( \frac{\sqrt{2}}{2} \right) \text{ exact answer}$$

#44

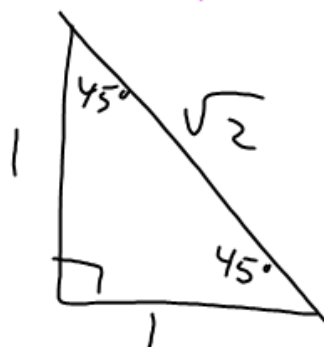


$$\cos 45 = \frac{x}{10}$$

$$x = 10 \cos 45^\circ$$

$$x = 10 \cdot \frac{1}{\sqrt{2}} = 10 \cdot \frac{\sqrt{2}}{2} = \frac{10\sqrt{2}}{2} = 5\sqrt{2}$$

$$y = 10 \sin 45^\circ = 10 \cdot \frac{\sqrt{2}}{2} = 5\sqrt{2}$$

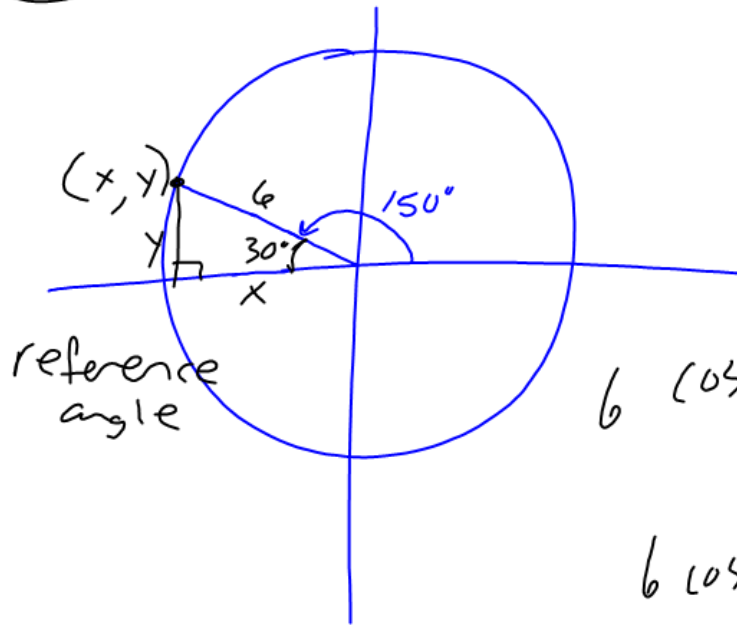


$$x \cdot \frac{\sqrt{2}}{10} = \frac{1}{\sqrt{2}}$$



$$x = \frac{1}{\frac{\sqrt{2}}{10}} \Rightarrow \frac{10}{\sqrt{2}} \Rightarrow \frac{10\sqrt{2}}{2}$$

#45



$$6 \cos(30^\circ) = \frac{x}{6} \cdot 6$$

$$6 \cos(30^\circ) = x$$

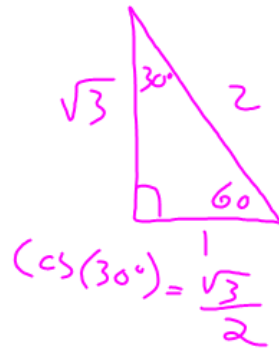
$$x \approx 5.2 \text{ approx.}$$

$$6 \cdot \frac{\sqrt{3}}{2} = \frac{6\sqrt{3}}{2} = 3\sqrt{3} = x \text{ exact}$$

$$\sin(30^\circ) = \frac{y}{6}$$

$$6 \sin(30^\circ) = y$$

$$6 \cdot \frac{1}{2} = y = 3$$



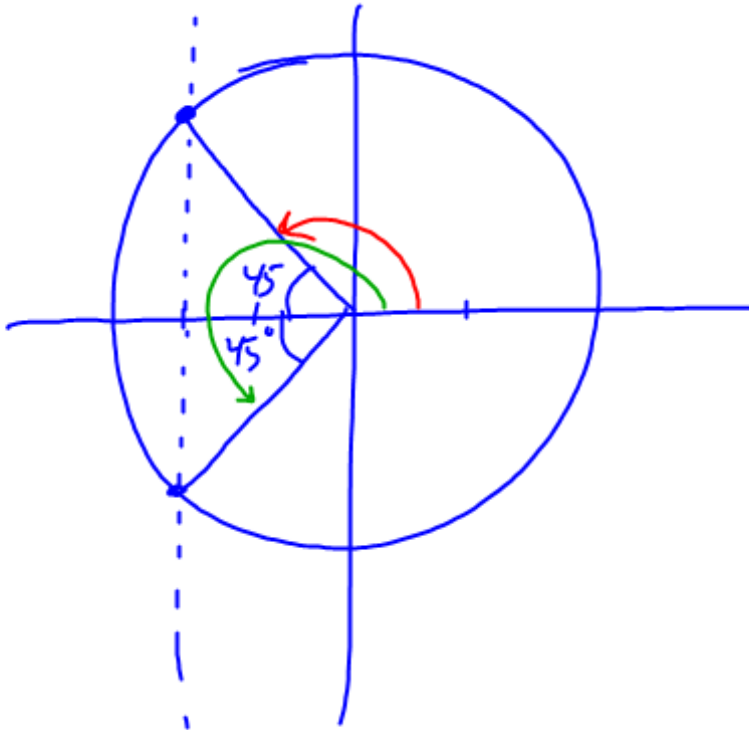
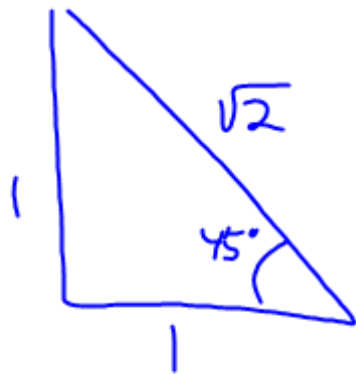
Try section 2.2 #61-66 (to turn in tomorrow)

$$\frac{1}{x} = \sqrt{2} \quad x = \frac{1}{\sqrt{2}}$$

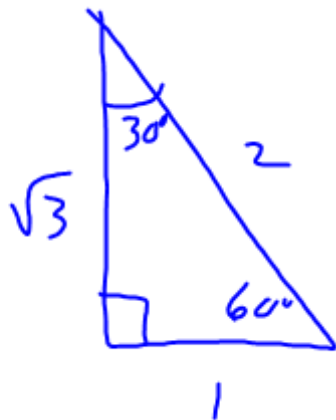
(64)  $\sec \theta = -\sqrt{2}$

$\frac{\text{hyp}}{\text{adj}}$

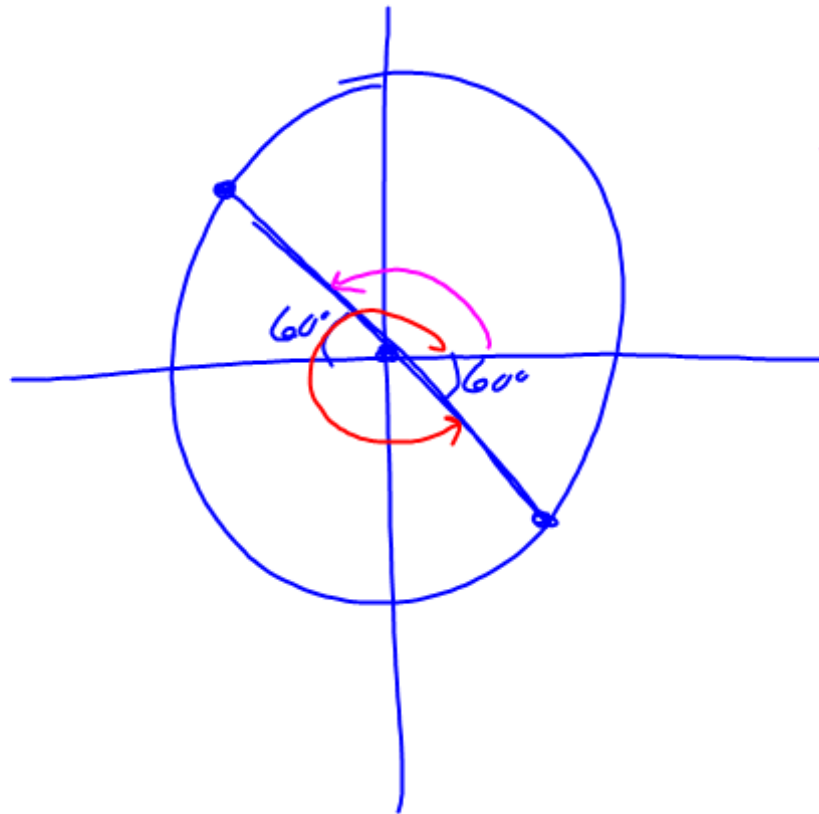
$\theta = 135$   
 $\theta = 225$



(66)  $\cot \theta = -\frac{\sqrt{3}}{3}$   
 $\frac{\text{adj}}{\text{opp}}$   
 $\theta = \underline{60^\circ}$



$$\frac{1}{\sqrt{3}} = \frac{\sqrt{3}}{3}$$

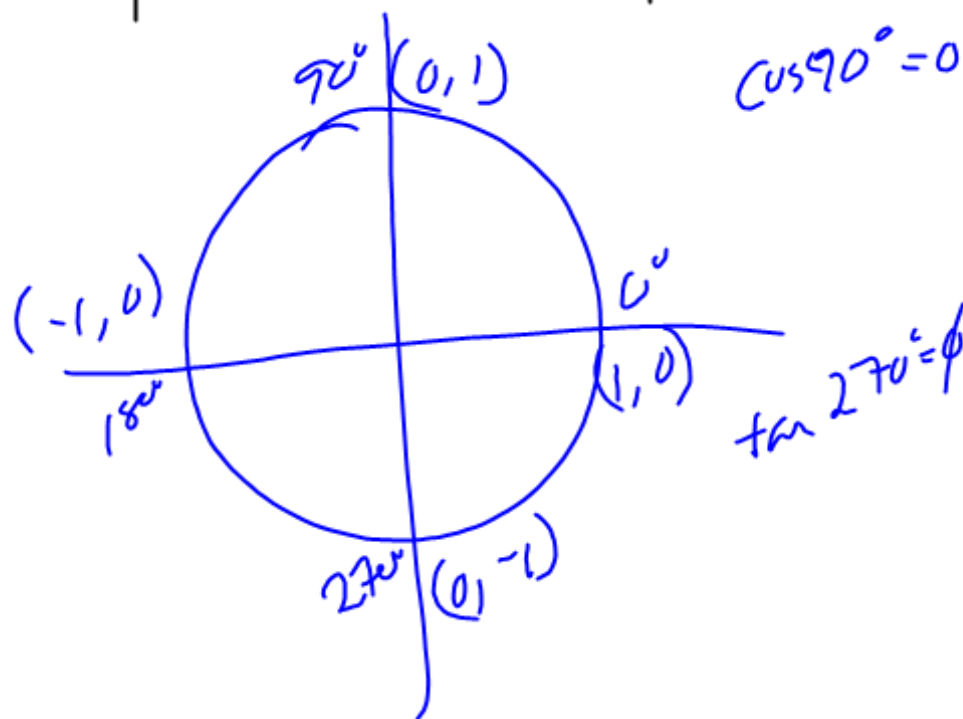
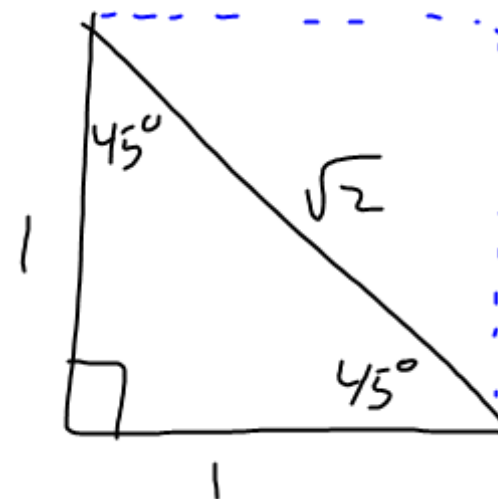
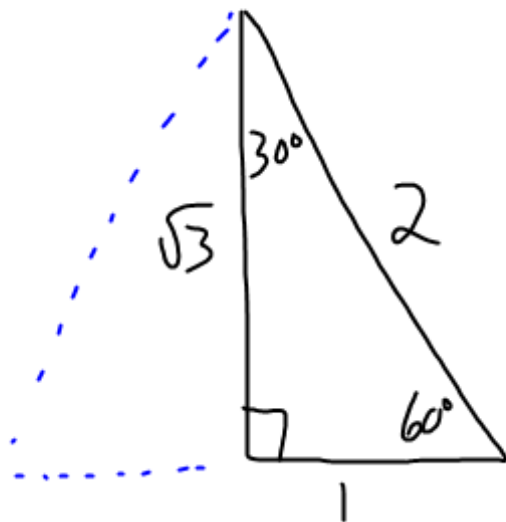


$\theta = 120$   
 $= 300$

$$\sin 30 = \frac{1}{2}$$

$$\sin 60 = \frac{\sqrt{3}}{2}$$

$$\sin 45 = \frac{\sqrt{2}}{2}$$



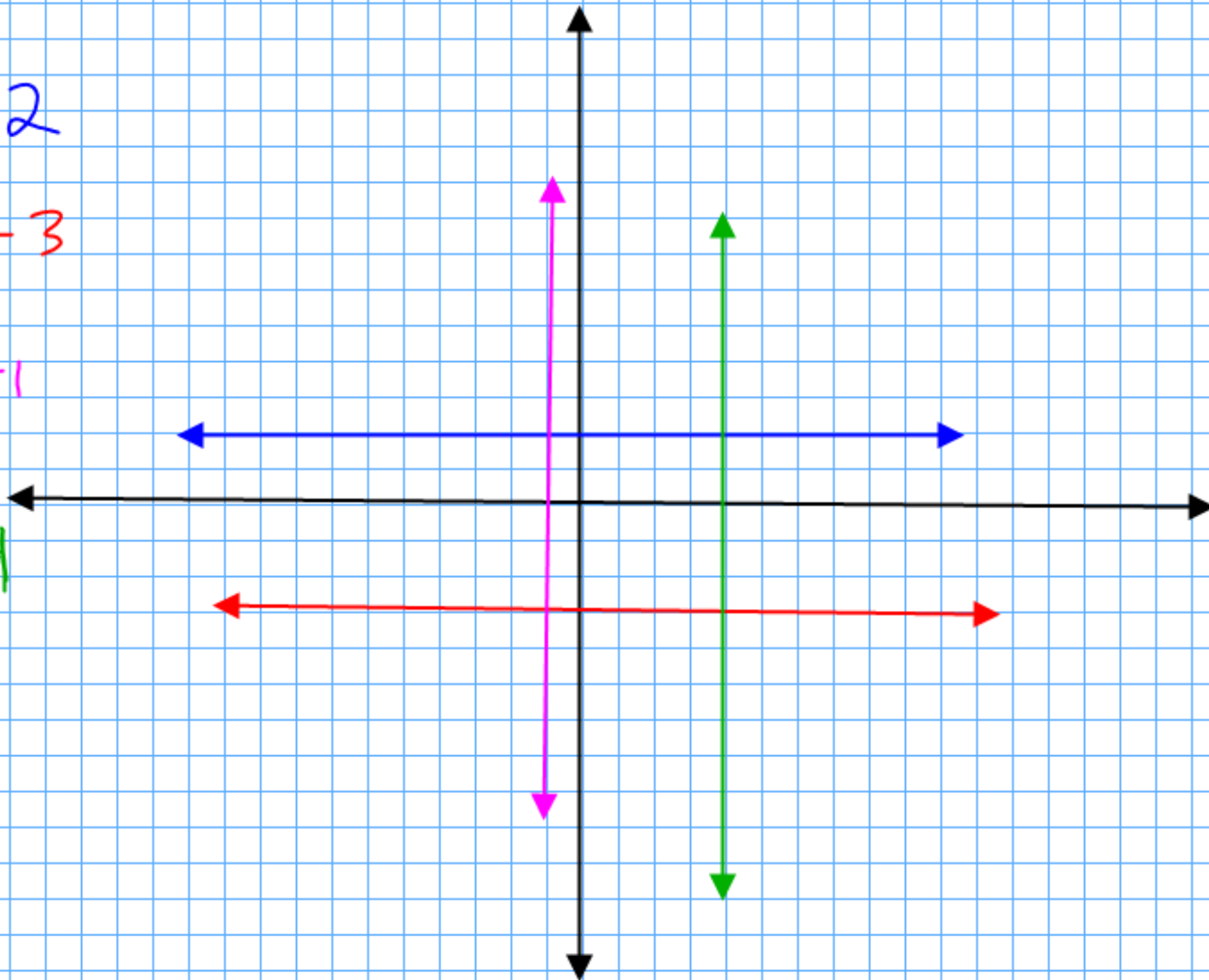


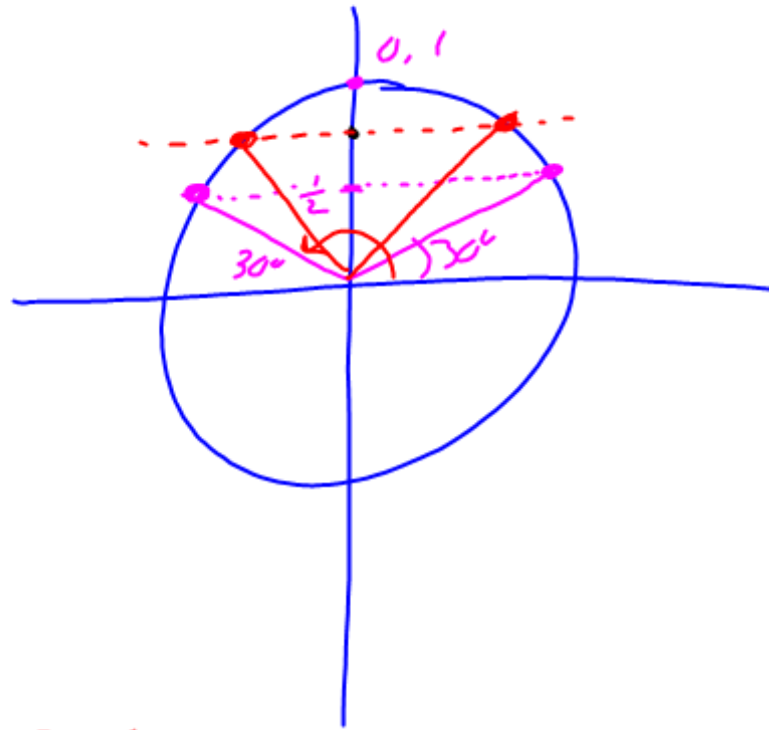
$$y = 2$$

$$y = -3$$

$$x = -1$$

$$x = 4$$





$$\sin \theta = \frac{1}{2}$$

$$y = \frac{1}{2}$$

$$\theta = 30^\circ$$

$$= 150^\circ$$

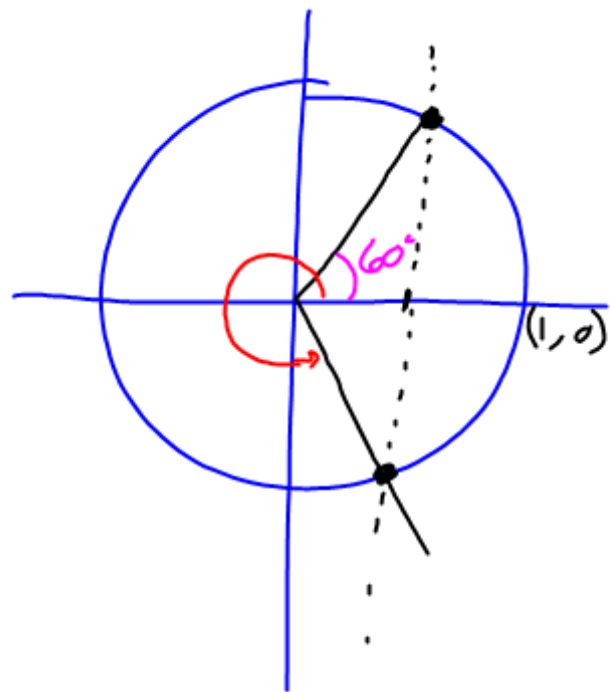


$$\sin \theta = \frac{\sqrt{3}}{2} \approx 0.866$$

$$\theta = 60^\circ$$

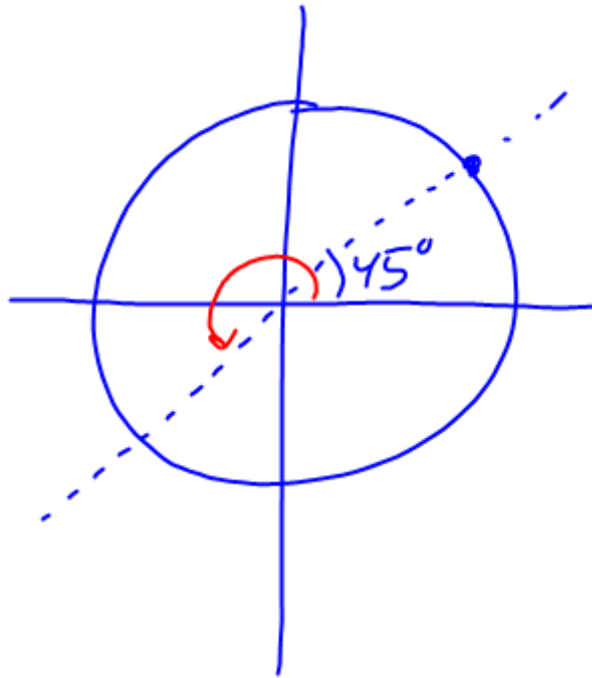
$$= 120^\circ$$

For sine → look horizontally  
CSI



$$\begin{aligned}\cos \theta &= \frac{1}{2} \\ x &= \frac{1}{2} \\ \theta &= 60^\circ \\ &= 300^\circ\end{aligned}$$

For cosine - look vertically  
secant



$$\tan \theta = 1$$

$$\frac{y}{x}$$

$$\theta = 45^\circ$$

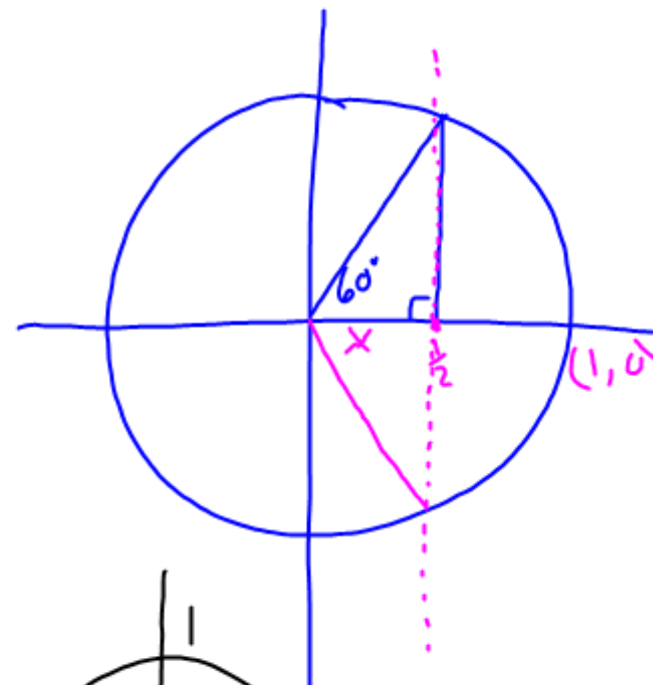
$$= 225^\circ$$

For tangent, look diagonally

$$\cos \theta = \frac{1}{2}$$

$$\theta = 60^\circ$$

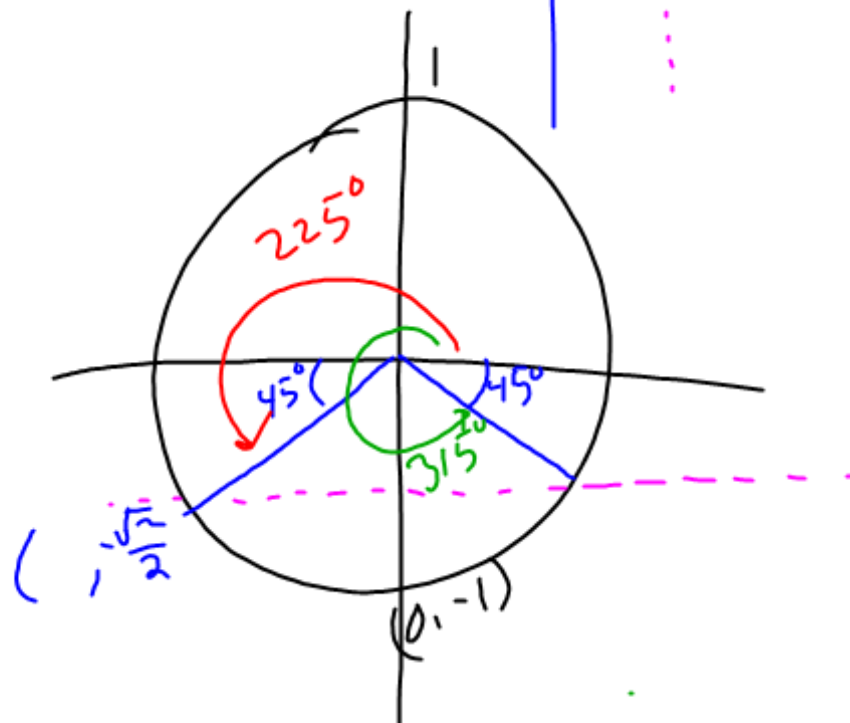
$$\theta = 300^\circ$$

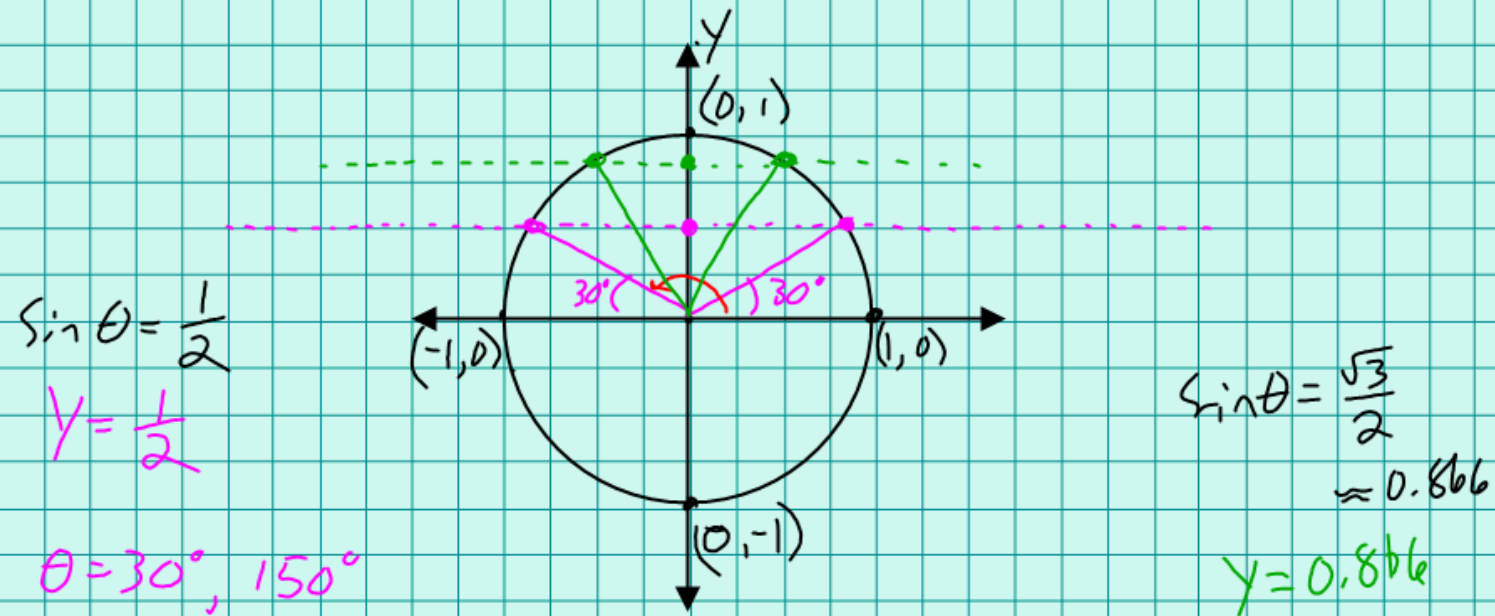


$$\sin \theta = -\frac{\sqrt{2}}{2}$$

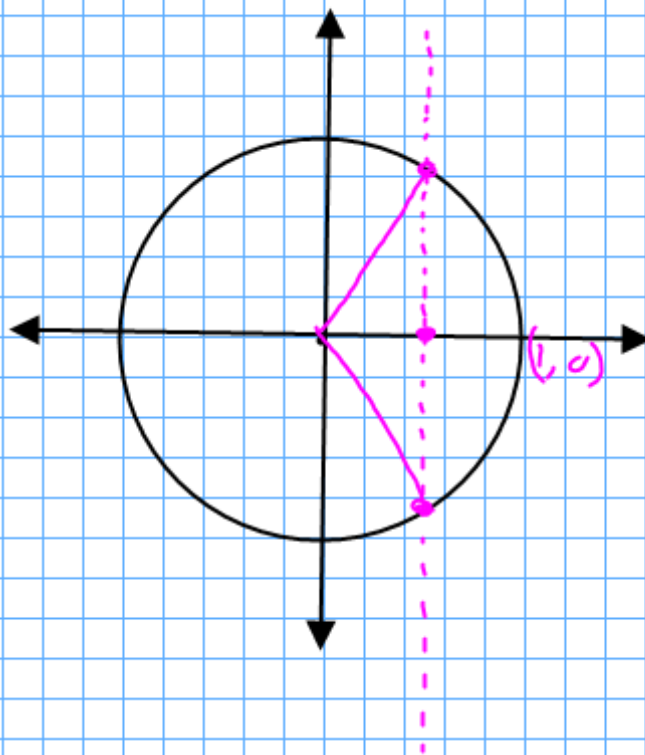
$$\theta = 225^\circ$$

$$\theta = 315^\circ$$





$$\cos \theta = \frac{1}{2}$$
$$x = \frac{1}{2}$$



$$\sin \theta = \text{horiz.}$$
$$\cos \theta = \text{vert.}$$
$$\tan \theta = \text{diagonally}$$

• Sect 2.3 # 22, 23, 26, 28, 35

• Re look at 2.2 #61-66 and have it done to turn in